

CLAIMS

What is claimed is:

1. A method for centrally recording and modeling the acoustics in a closed room or a partially enclosed outdoor room section, comprising the steps of:
generating a sound signal with at least one acoustic source in the room or the room section;
recording a room response with at least one measuring microphone;
transferring software for performing a measurement of the room response from a remote central computer to a local computer to be used for the measurement;
measuring with the local computer data characteristic of the room response;
and
transmitting the measured data for additional processing to the remote central computer or to at least one additional computer.
2. The method of claim 1, wherein the local computer is selected from the group consisting of personal computer, personal digital assistant, microprocessor and server.
3. The method of claim 1, wherein the measured data are transmitted together with additional data required for the additional processing.

4. The method of claim 1, wherein at least one of the software and the data are transferred via the Internet.
5. The method of claim 1, wherein at least one of the software and data are transferred via data carriers.
6. The method of claim 5, wherein the data carrier is a compact disc.
7. A method for measuring acoustic room properties of an enclosed room or a partially enclosed room, comprising the steps of:
generating a sound signal in the room or room section with at least one acoustic source;
recording the generated sound signal with at least one measuring microphone; and
calibrating an amplification factor of an output of the acoustic source and an amplification factor of an input of the microphone;
wherein the amplification factor of the acoustic source output and the microphone input are calibrated automatically.

8. The method of claim 7, wherein the automatic calibration includes transmitting a pulsed test signal to the at least one acoustic source, sensing a signal generated by the acoustic sources in response to the pulsed test signal with the measuring microphone, and adjusting the amplification factors of the acoustic sources and the measuring microphone until a predetermined level difference is obtained between the sensed signal and a recorded intrinsic noise level, without the sensed signal being saturated.
9. The method of claim 8, wherein the level difference between the sensed test signal and the recorded intrinsic noise level is that least 30 dB.
10. The method of claim 7, wherein for a local measurement, a measurement signal is transmitted to the acoustic sources to generate the sound signal, the signal obtained from the measuring microphone is recorded simultaneously with the transmission of the measurement signal, and the recording is extended past the termination of the measurement signal until a predetermined level difference between the signal obtained from the measuring microphone and a level measured during the transmission of the measurement signal is obtained.
11. The method of claim 10, wherein the measurement signal is composed of white noise or pink noise.

12. The method of claim 10, wherein the measurement signal is composed of a pseudorandom noise signal produced with the MLS method.
13. The method of claim 10, wherein the measurement signal is composed of two segments, with a first segment including a pseudorandom noise signal produced by the MLS method and the second segment composed of white noise or pink noise.
14. A computer system for measuring acoustic room properties of an enclosed room or a partially enclosed room, comprising:
at least one acoustic source generating a sound signal in the room or room section;
at least one measuring microphone recording the generated sound signal;
and
calibration means for automatically calibrating an amplification factor of an output of the acoustic source and an amplification factor of an input of the microphone.

15. A computer program product for measuring acoustic room properties of an enclosed room or a partially enclosed room, said program comprising software code that causes a computer to generate a sound signal in the room or room section with at least one acoustic source, record the generated sound signal with at least one measuring microphone, and calibrate an amplification factor of an output of the acoustic source and an amplification factor of an input of the microphone, wherein the amplification factor of the acoustic source output and the microphone input are calibrated automatically.
16. A computer program product embodied on a computer-readable medium for measuring acoustic room properties of an enclosed room or a partially enclosed room, the computer program product comprising computer-readable program means that enable a computer to generate a sound signal in the room or room section with at least one acoustic source, record the generated sound signal with at least one measuring microphone, and calibrate an amplification factor of an output of the acoustic source and an amplification factor of an input of the microphone, wherein the amplification factor of the acoustic source output and the microphone input are calibrated automatically.

17. A method for recording and processing data, said data representing a local measurement of one or several physical quantities, the method comprising the steps of:

performing the local measurement with a local computer;

transmitting software for performing the local measurement from a remote central computer to the local computer; and

transmitting the data obtained by the measurement for additional processing to the remote central computer or to at least one additional computer.

18. A method for engaging a user to perform a business transaction based on data representing a local measurement of one or several physical quantities, the method comprising the steps of:

transmitting software from a remote central computer to a local computer for performing a local measurement;

performing the local measurement with the local computer;

transmitting the data obtained by the measurement for additional processing to the remote central computer or to at least one additional computer;

comparing the additionally processed data with expected data;

computing improved processed data by simulating the local measurement with added improvement means; and

suggesting to the user to acquire the added improvement means that cause the improved processed data to most closely match the expected data.

19. The method of claim 18, wherein acquiring the improvement means includes purchasing the improvement means.
20. The method of claim 19, further comprising debiting an account for a purchase price of the improvement means.
21. The method of claim 20, wherein the account is a credit card account, and the method further including authenticating the credit card account before the account is debited.
22. The method of claim 18, further including transmitting to the user a shipping advice of the improvement means.
23. The method of claim 18, wherein the physical quantity is an acoustic response of a room.
24. The method of claim 23, wherein the improvement means are selected from the group consisting of sound-absorbing, sound-reflecting and sound-directing elements.